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ABSTRACT

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Self-Concept and Identified Problem Differences Between Pre- and Postmenarcheal Adolescents

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ABSTRACT

Differences in the number and types of problems as well as in self-reported self-concept between 232 black and white pre- and postmenarcheal adolescents were examined in this study. The study also examined differences in these variables across four developmental levels of menarcheal status: Initial, Intermediate, Middle, and Established. These data were anlyzed using a multiple ANOVA technique, and significant differences were found between pre- and postmenarcheal girls and between the two racial groups. Postmenarcheal adolescents had more problems but were also higher on self-concept variables. Black females experienced the menarche earlier than whites, had different kinds of problems, and described themselves differently on the self-concept measures. These data were interpreted as supporting the view that menarche onset is a positive event for most young females.

The menarche is viewed as an important milestone in female development since it is the biological indicator of emerging adult status (Benedek, 1950; Deutsch, 1967). But despite its importance to female development, it has not received much careful study. And the attention it has received is conflicted. Empirical and clinical findings indicate the menarche is a positive event, a negative event, or both. Stone and Barker (1939) examined self-reported personality differences between 1,000 white California 13 and 14 year-old pre- and postmenarcheal adolescents. They found that the postmenarcheal group were inclined to favor more traditional sex-appropriate behaviors and interests than were the premenarcheal group, a change which has been interpreted as positive. Thus these findings may be taken as support for the belief that menarche onset leads to (positive) changes in one's self-view. However, since the group dichotomization was so gross, the changes in reported behaviors and interests could have been due to age or other physical and/or social factors and not to the menarche. The same criticism may be directed at Faust's (1960) study of developmental maturity and prestige in young females. Faust divided 731 California sixth- through ninth-grade females into four groups: prepuberal (premenarche); puberal (menarche had occurred during the year of testing); postpuberal (menarche onset within one to three years of testing); and late adolescence (all others). She then collected sociometric friendship choice data and found that while developmental maturity (menarcheal status) was an important factor in determining a girl's reputation, it was not itself sufficient, but was instead part of a complex of factors which included emotional, social, sexual, and personality changes associated with adolescent development. Faust's data have been interpreted as generally supporting the belief that menarche onset is related to positive changes in self-perception. Thus, when Harper and Collins (1972) failed to replicate Faust's findings with 631 Australian adolescents, this general interpretation is called

into question. Again, part of the problem in clarifying this relationship between menarcheal status and behavior may be the grossness of group classification.

The clinical literature is perhaps as conflicted as the empirical literature. Both Kestenberg (1961) and Hart and Sarnoff (1971) argue that the menarche is a positive turning point in the acceptance of femininity; that it helps the adolescent female to organize her self-view. Likewise Blos (1962) describes the premenarcheal girl as one who views herself with vagueness and ambiguity but the postmenarcheal female views herself with clarity of self-perception due to having proof of her femininity. In contrast Deutsch (1944) sees the menarche as traumatic, and Shainess (1962) reports that 75 percent of his sample of adult females reported that they feared the onset of menarche. Further, but more indirect support for the negative view may be seen in research describing our culture's attitudes towards menstruation (Ernster, 1975; Paige, 1977). Finally Whisnant and Zegans (1975) manage to include both points-of-view. They argue that our culture regards the menarche as an hygienic crisis but that it also has a positive component. On the basis of semistructured interviews with 35 pre- and postmenarcheal females, Whisnant and Zegans report that, while the postmenarcheal group viewed the feminine role more positively and identified more with their mothers, they also reported fear, shame, and privacy concerns as well as a tendency to regress to a more dependent status.

Sifting through these diverse findings, it appears that the onset of the menarche may be related to at least two change areas. The young adolescent may view this marker of reproductive development as something akin to a rite de passage, closing her childhood years and beginning her feminine adult years. If so, such a change should affect how she views herself and thus should affect her self-concept. At the same time this change in biological status is

associated with changes in social status, and such issues as autonomy, dating, career, education, etc. become more pressing concerns for the adolescent and her family. Because she is still relatively unskilled but is now facing different pressures, it seems likely that the post menarcheal adolescent will face more problem areas. Thus it was hypothesized that increases in self-concept and identified problems would occur for postmenarcheal girls. As a secondary issue race was included as an independent variable and thus this study compared self-concept and identified problem differences across developmental levels and race.

METHOD

Subjects. Young seventh-grade females enrolled in three coeducational private schools (n = 130 white) and three public schools (n = 102 black) were the participants in this study. All had parental permission to participate. Table 1 includes demographic data on these participants.[1]

Insert Table 1 Here

Procedure. The participants were tested in physical education classes. Each participant completed a personal history questionnaire, the Tennessee Self Concept Scale (Fitts, 1965), and the Junior High School Form of the Mooney Problem Check List (Mooney & Gordon, 1950). All testing was completed in one sitting.

Instruments. The Junior High Version of the Mooney Problem Checklist consists of 210 items divided into seven problem areas: Health and Physical Development;

[1]Six blacks were tested in private schools and 40 whites in public schools but neither group was large enough to be included in our data analysis procedures. Therefore these subjects were dropped from the study.

School; Home and Family; Money, Work and the Future; Boy-Girl Relations; Relations to People in General; and Self-Centered Concerns. These items were derived from examining junior high school records for problems common to this age group, and persons complete the form simply by marking problems they have. The score is the number of problems identified by area. Self-concept was assessed by the Tennessee Self Concept Scale (TSCS). This instrument is a 100 item self-report battery. The total scale consists of a counseling and a clinical form and scores for both forms are derived from the same items. The counseling form provides the following scores:

1. Total Positive--a measure of overall self-esteem
2. Identity--a description of basic identity
3. Self-Satisfaction--the degree of self-acceptance
4. Behavior--the individual's perception of how she functions
5. Physical Self--view of body, health, appearance, skills, and sexuality
6. Moral-Ethical Self--self-perception of the degree of "goodness-badness"
7. Personal Self--one's sense of personal worth.
8. Family Self--the degree of adequacy or worth one feels as family member
9. Social Self--the degree of adequacy or worth one feels in social situations.

In addition, the counseling form provides variation scores which include row, column and total variability scores, indicating the degree of inconsistency from one area of self-perception to another; total conflict scores, a measure of conflicting responses to positive and negative items; and a self-criticism score which is a type of lie scale.

The clinical form of the TSCS includes six scales measuring: (a) defensiveness, (b) general maladjustment, (c) psychosis, (d) personality disorder, (e) neurosis, and (f) personality integration. Evidence of satisfactory reliability

and validity are reported by Fitts (1965).

Design. The independent variables are menarcheal status and race. The dependent variables were analyzed in the related clusters described below:

1. Demographic Variables (age, height, weight, number of people living at home, number of periods, and number of months menstruating);
2. Tennessee Counseling Scores (Total Self, Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self and Social Self);
3. Tennessee Clinical Scores (Defensive Positive, General Maladjustment, Psychosis, Personality Disorder, Neurosis and Personality Integration);
4. Tennessee Variation Scores (Self-Criticism; Row, Column and Total Variability scores; and conflict scores).
5. Mooney Problem Checklist Scores (Health and Physical Development; School, Home & Family; Money, Work, and the Future; Boy-Girl Relations; Relations with People in General; and Self-Centered Concerns.)

Since the items in each dependent variable cluster lack independence, a multiple ANOVA technique was used, and two separate sets of analyses were run. The first analyses used a 2 x 2 MANOVA cross-sectional design to examine differences in race and between pre- and postmenarcheal females. The second analysis was a 2 x 4 MANOVA cross-sectional design for race and four levels of menarcheal status: Initial (Menstruating 1-4 months only); Intermediate (5-8 months); Middle (9-12 months; and Established (menstruating more than 1 year). The first analyses would parallel the rather gross categories used in other similar research and would allow testing for just pre- and postmenarcheal group differences in our dependent variables. The second analysis would enable detection of any differences existing in the dependent measures across the four levels of menarcheal status.

RESULTS

Since two sets of analyses were carried out on five clusters of dependent variables, the results will be reported by cluster area to help maintain clarity.

Demographic Variables. In the initial 2 x 2 analysis, both independent variables had a significant effect. For menarcheal status, Rao's approximate F (6,223) was 75.85, $p = .0000$. Postmenarcheal girls were significantly older, heavier, and lived with fewer people at home than premenarcheal girls. Number of periods and number of months menstruating were also significant, but these two variables add nothing to our understanding since it was highly likely they would be significant. They were included as a check on the data processing. However postmenarcheal girls were no taller than premenarcheal girls. Rao's approximate F (6,223) was 7.55 for race and this was also highly significant ($p = .0000$) and due to age and number of people at home. Looking at Table 1, it appears that the significant age effects are due mainly to the earlier onset of the menarche among blacks. Likewise black adolescents lived with more people at home than did whites. Finally, the the 2 x 2 MANOVA analysis no significant interaction occurred.

The second analysis used a 2 x 4 MANOVA design with race and four levels of menarcheal status as independent variables. Again these were significant effects for both variables but no interactions. Rao's approximate F (18,275) for menarcheal status was 75.36, $p = .0000$. There were no differences across menarcheal status levels for number of people at home, height, or weight, but age was significant as was number of periods and number of months. Race was also significant, with Rao's approximate F (6, 97) equalling 3.07, $p = .009$. And these effects were again due to age and number of people at home.

Identified Problems. The seven dependent variables in this cluster comprised the identified problems list. For the initial 2 x 2 analysis, both independent

variables were significant. Rao's approximate F (7,22[illegible] for Menarcheal Status was 1.98, p = .05. The problem areas which were significant were Home and Family; Money, Work, and the Future; and Boy-Girl Relations. Table 2 contains these means, and it appears from an inspection that the differences are due to post-menarcheal females listing significantly more problems in these three areas than did premenarcheal girls. Rao's approximate F (7,222) for race was 14.14 and this was significant at the .0000 level. The two racial groups differed significantly on problems dealing with Health and Physical Development; School; Money, Work, and the Future; and Relations with People in General. As the Means in Table 2 indicate, blacks identified more problems with Health and Physical Development and Money, Work and the Future. Whites identified more problems with School and with Relations with People in General.

In the second analysis, menarcheal status was not significant nor were there any interactions but race was a significant variable. Rao's approximate F (7, 96) was 6.04, p = .0000. Again the critical problem areas were Health and Physical Development, Money, Work, and the Future, and Relations with People in General. These data support our hypothesis that postmenarcheal females will have more identified problems than premenarcheal girls.

Insert Table 2 About Here

Tennessee Self Concept Counseling Score. In the first analysis (2 x 2) only race was a significant effect. Rao's approximate F (9,220) was 5.27, p = .0000. Blacks had higher Physical Self Scores and whites had higher Social Self scores. The remaining seven dependent variables in this cluster did not significantly differentiate the two racial groups. In the second analysis (2 x 4) race was again the only significant effect. Rao's approximate F (9, 94) was 3.38, p = .001, and Physical Self and Social Self were the only two discriminating dependent

variables. Despite this lack of statistical significance on the Tennessee Counseling form the data in Table 3 do indicate that for whites, and for all the self-concept scores except Self Satisfaction, postmenarcheal females classified as Initial scored higher than premenarcheal females. White postmenarcheal females classified at the Intermediate menarcheal level, however, generally had lower self-concept scores than even the premenarcheal white females. And white females classified at the Middle menarcheal status in all cases had the highest self-concept scores. A similar, but not as consistent pattern held for black females. Likewise, an inspection of Table 2 indicates some corollary support from the Mooney Problem data. Generally whites and blacks classified at the Middle menarcheal status level had the fewest identified problems, a logical complementary relationship to self-concept. All of these relationships may be interpreted as offering some support for the hypothesis regarding self-concept.

Insert Table 3 About Here

Tennessee Self Concept Clinical Scores. An analysis of these six scale scores was included because several clinical workers regard the onset of menarche as a traumatic and emotionally labile event. Since the Tennessee clinical scale scores were developed to measure such effects, it was thought they might reflect some of the negative aspects associated with the onset of the menarche. In the 2 x 2 analysis, significant effects for both independent variables as well as an interaction effect were obtained. Postmenarcheal girls differed significantly from premenarcheal girls (Rao's approximate F (6,223) was 2.43, $p = .03$) on general maladjustment scores and psychosis scores. This scale is inverted so high scores reflect better adjustment. As the data in Table 4 indicates, postmenarcheal girls, especially whites, were better adjusted than premenarcheal girls. These postmenarcheal girls also scored lower on the psychosis scale than did premenarcheal girls. In the 2 x 4 analysis, menarcheal

status was not significant and there were no significant differences across the four developmental levels for either general maladjustment or psychosis scores. Therefore it appears that these premenarcheal females are less well adjusted than are postmenarcheal females. These findings, while contradicting the view that the onset of menarche is traumatic, do support the view that it serves as a positive organizer of behavior.

For race, Rao's approximate F (6,223) was 24.55, $p = .0000$. Thus, in the initial 2 x 2 analysis, the significant differences occurred on Defensive Positive, General Maladjustment, Psychosis, and Personality Integration Scales. As the means in Table 4 illustrate, the black adolescent females described themselves in ways that, according to the scale, are interpreted as indicating more defensiveness, maladjustment, psychosis, and less well-integrated personalities. When differences were analyzed across the four developmental levels (2 x 4) differences due to defensiveness were no longer meaningful but differences due to the other three scales still were significant. A significant interaction occurred on the Defensive Positive Scale for the 2 x 2 analysis. Rao's approximate F (6,223) was 2.59, $p = .02$. Postmenarcheal black females were less defensive than their premenarcheal counterparts but there was very little change for white adolescents on this scale. This explains why Defensive Positive ceased to be a significant discriminator across postmenarcheal developmental levels.

Insert Table 4 About Here

Tennessee Variation Scores. These scores include a self-criticism score, a type of lie scale; variability scores which reflect the amount of variability from one area of self-perception to another; and the Total Conflict score which taps the amount of confusion and conflict in self-perception. They were analyzed because they provide more subtle measures of variation in self-concept. In both the 2 x 2 and 2 x 4 analyses there were no effects for menarcheal status nor

were there any interactions. However, in the 2 x 2 analysis significant race effects were obtained; Rao's approximate F (5,224) was 10.78, p = .0000. Those dependent variables which showed significant race effects were Self-Criticism, Total Conflict, Row Variability, and Total Variability. Blacks were less self-critical, more conflicted in their self-perception, and more inconsistent from one area of self-perception to another, especially in Identity, Self Satisfaction, and Behavior subscale scores (row variability). Among the postmenarcheal adolescents there was also a significant effect for race only. Rao's approximate F (5, 98) was 5.98, p = .0001. The black postmenarcheal females were less self-critical across the developmental levels. They were also more conflicted. Finally they were more variable in Identity, Self Satisfaction, and Behavior scores (row variability). There were no differences, however, in Physical, Moral-Ethical, Personal, Family, and Social Self Scores (column variability).

Summary. In the 2 x 2 analysis, postmenarcheal adolescents significantly differed from the premenarcheal girls on age, weight, and the number of people they lived with. There were significant differences between the two groups in number of identified problems. Postmenarcheal girls had more problems in home and family areas, in financial and career decisions, and with heterosexual relationships. Postmenarcheal girls also tended to have higher self-concept scores and were significantly better adjusted than were the premenarcheal girls. In the second analysis (2 x 4), only age discriminated across the four menarcheal status levels, though the data does reveal a pattern which indicates that girls who have been menstruating for about a year (the middle level) have fewer problems and better self-conceptions than their counterparts.

There were numerous significant differences due to race. Black adolescent

females achieved the menarche earlier and they lived with more people at home than did the white adolescent groups. Blacks had more problems related to health and physical development and to financial and career decisions whereas whites had more problems with school issues and in their relations with other people in general. The black adolescents had significantly higher Physical Self-Concept scores; whites had higher Social Self-Concept scores. These black girls appeared to be more defensive, less well-adjusted, and to have less well integrated personalities. They also appeared to be less self-critical, more conflicted within various self-concept areas, and more confused across self-concept areas, especially in the areas of identity, self-satisfaction, and behavior. The only significant interaction indicates that white adolescents' defensiveness is lower than black adolescents' and remains fairly constant after the onset of the menarche. But black females' defensiveness decreases with the onset of the menarche.

Taken all together these data do provide support for our hypotheses that postmenarcheal adolescent females would have more identified problems and better self-concepts than premenarcheal adolescents.

DISCUSSION

In this study identified problem and self-concept differences were examined between pre- and postmenarcheal adolescent females and across four levels of developmental maturity for the postmenarcheal group. There were significant differences in the self-concept variables and for the number of problems identified between the two groups but there were no significant differences for these variables among girls classified at the Initial, Intermediate, Middle, and Estbalished menstruation categories. The only significant difference that did occur across these developmental levels was due to age. The average age differences

between white premenarcheal adolescents and the four developmental levels were 3, 11, 19, and 13 days respectively. For black adolescents the average age differences between the premenarcheal group and the four menstrual categories were 1, 6, 8, and 4 days respectively. The average differences between white adolescents at the Initial and Intermediate levels, Intermediate and Middle levels, and Middle and Established levels were 8, 8, and 6 days respectively. For black adolescents these same average differences were 7, 2, and 4 days. Therefore while statistically significant it is not likely that these age differences are very meaningful.

One of the hypotheses was that the onset of the menarche would have a positive influence on self-concept. On all but one of the Tennessee Self Concept Counseling scales, the postmenarcheal females had higher scores than the premenarcheal girls. The clinical self-concept scores showed significant differences between the two groups in adjustment and psychosis scale scores, indicating significantly better adjustment among the postmenarcheal group. Generally these findings support this hypothesis but not impressively so. Of course one reason for the lack of statistical support on the Tennessee Counseling scores for this hypothesis may be attributed to this scale's power. It may not have been sensitive enough to pick up such changes. Another possible reason is that any significant differences might have been depressed by changes in cognitive ability in early adolescence. Garwood and Greenberg (Research Note 1) have shown that objective self-concept scores are lower for adolescents who are developing formal thought processes than are the self-concept scores of adolescents still operating at the level of concrete thought. If such a factor were operating here it would confound any self-concept changes associated with the onset of the menarche. Still another possibility is that adolescent girls have been changing physically and physiologically for some time prior to the

menarche. Faust (1977) points out that bodily changes and secondary sex characteristics associated with adult femininity normally occur before the onset of the menarche. Therefore, changes in self-concept may have occurred more gradually over time, and would require a longitudinal rather than a cross-sectional investigative approach to determine the extent of such changes.

Postmenarcheal adolescents did identify more problems than did premenarcheal girls. And these problems reflected the most likely conflict point for girls who are beginning to menstruate. If the menarche is the last major component of the change from girl to developing woman, the postmenarcheal girl is likely to face more problems at home with her family since they know of this significant change and will likely begin exerting pressures for the girl to exhibit more "grown-up" behavior and attitudes. And if, as Whisnant and Zegans (1975) point out, there is a tendency for girls beginning to menstruate to display regressive dependency behavior at home, then the resultant discrepancy between family expectations and daughter's behavior may help explain this increase in problems at home. Postmenarcheal girls also experienced more financial and career decision problems, probably due to increased pressure for a career decision now that burgeoning womanhood was upon here, as well as with increased concerns for clothes, bodily adornment items, and other money-oriented purchases by the girl herself. This latter concern receives some support from the Stone and Barker (1939) data. Finally postmenarcheal girls experienced more problems in relations with boys than did premenarcheal girls. This is alikely and an obvious problem area now that reproductive capacity is achieved.

While it is impossible from these data to determine the relative strength of importance of each of these problems to the girls who listed them as such, the problems identified seem to reflect normal growth concerns. On the surface they do not appear to be sufficiently serious to cause the menarche to be

viewed as a negative event. More than likely this view is held by girls who, for a variety of reasons, have not adjusted well and are in therapy. Most of the views of the menarche as a negative or traumatic event do come from such clinical case histories. Thus it seems likely that the problems associated with any changes in developmental status are, for most individuals, relatively normal events. While their presence is not liekly to seriously hamper relatively stable views of one's self, their resolution is likely to confirm one's self view. This may be one explanation why the girls who are ending their first year of menstruation (the middle group) appear to have higher self-concepts and fewer problems than the others. This is only a suggestion, however, since these are cross-sectional data.

Much of the variance in the dependent measures is due to race. There were more consistent effects for this variable than for menarcheal status. These data must be cautiously interpreted, however, since, as is frequently the case, race is compounded with social class. All the white girls attended private schools (a long standing tradition in New Orleans) whereas all the black girls in this sample attended public schools and this school attendance may be taken as prima facie evidence of social class. Thus, while there may be biological factors contributing to these race differences, it seems as likely that much of the difference is due to different child-rearing practices, attitudes and values held, and behavior considered as appropriate.

Frisch and Revelle (1970) have proposed a "critical weight" hypothesis to account for the onset of the menarche. These data may provide some support for this view. There were no differences in height between pre- and postmenarcheal girls but weight was a significant discriminator. However once the menarche had been reached weight no longer was significant. Thus the only physical difference between pre- and postmenarcheal girls in this study was weight.

Conclusions. The data from this study are interpreted as supporting the view that the menarche is a positive event in the young adolescent's life. And while postmenarcheal girls have more problems than do premenarcheal girls, these problems are not viewed as serious enough to support a negative view of the menarche. It would have been better if these data were collected longitudinally and the reader is cautioned to interpret these data in light of their cross-sectional nature. One interesting issue stemming from these data is the relationship between menarche and later attitudes toward menstruation. As Ernster (1975) and Paige (1977) point out, our culture continues to regard menstruation negatively. At what point then does this cultural attitude begin to interfere with the positive nature of menstruation evidenced in this study? This is a question in need of further study.

Finally these data provide renewed support for Stone and Barker's (1939) and Faust's (1960) general findings, and indicate that regarding the menarche as a negative or traumatic event is a viewpoint that perhaps should be shelved alongside the old "storm and stress" notion.

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FOOTNOTES

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TABLE 1

Demographic Variable Means By Menarcheal Status For White and Black Females

Menarcheal Status	Age (months)	Height (inches)	Weight (pounds)	Number of Months	Number of People
Pre-Menarcheal					
White (n = 67)	154.92	58.54	87.96	0.00	3.91
Black (n = 55)	154.47	57.85	95.10	0.00	5.44
Initial					
White (n = 25)	156.04	62.04	91.96	3.72	3.16
Black (n = 15)	154.07	61.33	88.48	3.87	5.20
Intermediate					
White (n = 13)	159.08	62.46	106.61	6.76	4.77
Black (n = 14)	156.71	54.57	104.80	6.35	4.57
Middle					
White (n = 10)	162.40	61.10	102.00	11.90	4.40
Black (n = 8)	157.25	62.87	110.12	10.62	4.25

TABLE 1--Continued

Established					
White (n = 15)	159.93	63.00	113.54	17.00	3.27
Black (n = 10)	155.90	51.70	104.20	14.80	4.40
Total Post Menarcheal					
White (n = 63)	158.60	62.21	101.72	8.81	3.71
Black (n = 47)	155.79	57.53	100.37	8.08	4.68

TABLE 2

Mooney Problem Checklist Means By Menarcheal Status For White and Black Females

Menarcheal Status	Health & Physical Development	School	Home & Family	Money, Work & the Future	Boy-Girl Relations	Relations with People in General	Self-Centered Concerns
Pre-Menarcheal							
White	4.60	9.01	5.79	3.60	5.04	9.27	8.73
Black	5.40	6.47	4.54	5.84	4.76	5.58	6.05
Initial							
White	4.44	8.96	5.56	6.08	5.52	10.96	8.16
Black	6.00	7.40	5.80	6.67	6.13	5.93	8.80
Intermediate							
White	5.54	9.31	7.23	4.30	6.23	10.23	9.85
Black	5.43	9.43	7.78	7.57	6.78	7.36	9.50
Middle							
White	3.00	7.20	5.70	4.50	4.60	8.50	9.30
Black	5.00	7.37	7.00	6.00	4.75	6.25	6.12
Established							
White	4.40	7.73	7.67	5.40	6.60	9.27	9.40
Black	7.00	7.90	8.70	8.50	8.00	7.60	9.30
Total Post Menarcheal							
White	4.43	8.46	6.43	5.30	5.78	10.02	8.98
Black	5.87	8.11	7.21	7.21	6.49	6.77	8.66

TABLE 3

Tennessee Self-Concept (Counseling) Scores By Menarcheal Status For White and Black Females

Menarcheal Status	Total	Identity	Self Satisfaction	Behavior	Physical Self	Moral-Ethical Self	Personal Self	Family Self	Social Self
Pre-Menarcheal									
White	328.88	120.94	104.37	103.57	68.12	65.48	63.37	66.52	65.39
Black	332.51	119.18	107.58	105.74	71.18	64.76	66.74	66.14	63.67
Initial									
White	337.44	125.20	104.08	108.16	68.16	66.12	66.56	68.56	68.04
Black	342.27	124.80	110.07	107.40	74.73	65.13	68.67	67.00	66.73
Intermediate									
White	324.85	122.23	101.61	101.00	69.00	63.85	62.00	64.85	65.15
Black	319.93	117.57	98.64	103.71	69.71	61.71	65.07	62.71	60.71
Middle									
White	351.80	127.10	111.10	113.60	71.50	71.10	70.50	70.10	68.60
Black	346.12	124.75	118.62	102.75	77.00	67.17	67.50	68.37	65.37
Established									
White	336.60	123.60	104.80	108.20	69.47	66.73	65.67	67.20	67.53
Black	328.70	119.90	105.10	103.70	72.40	66.20	62.80	66.30	61.00
Total Post Menarcheal									
White	336.92	124.51	104.86	107.55	69.17	66.59	66.03	67.71	67.41
Black	333.38	121.59	107.06	104.72	73.12	64.81	66.15	65.81	63.49

TABLE 4

Tennessee Self-Concept Clinical and Variation Scores By Menarcheal Status For White and Black Females

Menarcheal Status	Defensive Positive	General Maladjustment[a]	Psychosis	Personality Disordera	Neurosis[a]	Personality Integration	Self-Criticism	Total Conflict	Row Variability	Column Variability	Total Variability
Pre-Menarcheal											
White	51.15	89.83	49.01	69.13	80.09	8.19	37.57	36.91	20.88	31.30	52.18
Black	62.62	88.64	55.96	66.80	82.82	4.56	33.67	53.16	24.25	32.67	56.93
Initial											
White	52.60	94.28	46.80	68.80	84.00	8.44	39.40	36.64	19.00	31.48	50.48
Black	59.40	91.33	51.33	71.87	86.00	4.53	34.00	51.47	22.00	30.80	52.80
Intermediate											
White	48.77	92.23	47.00	63.85	77.54	7.69	41.31	36.54	22.61	36.46	59.08
Black	56.43	87.00	57.71	65.43	80.43	4.07	34.28	44.36	24.07	31.86	55.93
Middle											
White	58.20	97.60	51.70	73.90	87.60	9.60	37.10	37.40	20.70	26.30	47.00
Black	56.75	94.37	49.37	68.75	86.37	5.25	35.75	40.62	27.37	38.87	66.25
Established											
White	52.13	92.53	45.87	69.20	82.20	7.47	40.33	35.67	21.47	31.40	52.87
Black	55.40	87.90	52.90	69.90	79.70	6.10	35.00	42.50	25.20	31.90	57.10
Total Post Menarcheal											
White	52.59	93.97	47.40	68.68	82.81	8.24	39.65	36.51	20.60	31.67	52.27
Black	57.21	89.83	53.23	69.00	83.06	4.85	34.59	45.59	24.21	32.72	56.94

[a]Inverted scale